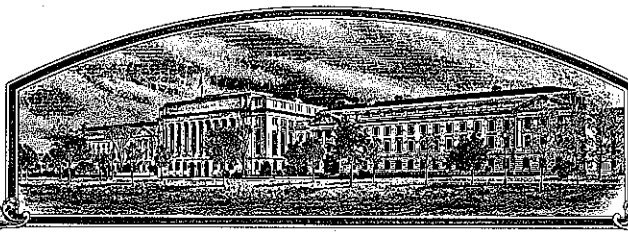


No.

9400041



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Terral-Norris Seed Co., Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC DEPOSIT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE APPLICANT(S) TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PROPAGATING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED IN THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Terral 1011'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirtieth day of June in the year of our Lord one thousand nine hundred and ninety-five.

Attest:

Thomas A. Salt

Acting Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Samuel J. Hittman
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.	3. VARIETY NAME
Terral-Norris Seed Co., Inc.		Terral X1011	Terral 1011
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP)		5. PHONE (include area code)	FOR OFFICIAL USE ONLY PVPO NUMBER 9400041 F I L I N G Date Dec. 6, 1993 Time 11:00 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M. F E E S Filing and Examination Fee: \$2150.00 / \$175.00 Date Dec. 6, 1993 Certificate Fee: \$300.00 Date May 9, 1995
P. O. Box 826 604 Blount Street Lake Providence, LA 71254		(318) 559-2840	
6. GENUS AND SPECIES NAME	7. FAMILY NAME (Botanical)		
Triticum aestivum	Gramineae		
8. CROP KIND NAME (Common Name)		9. DATE OF DETERMINATION	
Wheat		1985	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.)			
Corporation			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
Louisiana		1953	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS			
Thomas F. Terral P. O. Box 826 Lake Providence, LA 71254			

PHONE (include area code): (318) 559-2840

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

a. ☒ Exhibit A, Origin and Breeding History of the Variety.

b. ☒ Exhibit B, Novelty Statement.

c. ☒ Exhibit C, Objective Description of Variety.

d. ☒ Exhibit D, Additional Description of Variety.

e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.

f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office 12/01/93

g. ☒ Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act.)

☐ YES (If "YES," answer items 16 and 17 below) ☒ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

☐ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?

☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?

☐ YES (If "YES," through ☐ Plant Variety Protection Act ☐ Patent Act. Give date: _____) ☒ NO

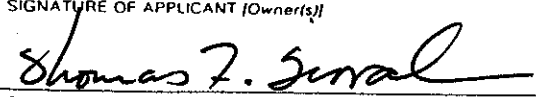
19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?

☐ YES (If "YES," give names of countries and dates) ☒ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s))	CAPACITY OR TITLE	DATE
	President	12/01/93
SIGNATURE OF APPLICANT (Owner(s))	CAPACITY OR TITLE	DATE

Origin and Breeding History

<u>YEAR</u>	<u>TEST</u>	<u>SOURCE</u>	
1971-72	Cross	x932 Coker 65-20*5/Witchita-7Transfer*2//R-Blueboy/Arthur	
1971-72	Space plants GH	x932-1	F ₁
1972-73	DSP 1156	x932-1-B	72GCF ₁ Bulk GH F ₂
1973-74	DSP 211		73DSP1156 GH Bulk F ₃
1974-75	PR Wheat 482		74DSP211-30 F ₄
1975-76	B-Wheat 62	x932-1-B3-7	PR 482 F ₅
1976-77	Head Row 6715		B-Wheat 62 F ₆
1977-78	B-Wheat 146	x932-1-B3-7-1	HR6715 F ₇
1978-79	HR4574		B-Wheat 146 F ₈
1979-80	A-Wheat 99	x932-1-B3-1-2	HR4574 F ₉
1980-81	HR14822		A-Wheat 99 F ₁₀
1981-82	Richland, IN Testing		HR14822 F ₁₁
1982-83	E-Wheat 35 (Richland, IN)		Richland, IN Testing F ₁₂
1983-84	Main Wheat III 44 (Richland, IN)	x932-1-B3-7-1-2AGF9	E-Wheat 35 F ₁₃
1984-85	Preliminary Line 4-20 (Bay, AR)		Main Wheat III 44 AL840169 RI932-1-B3-7-1-2AGF9 F ₁₄
NOTE: Line 4-20 was determined to be stable and breeding true for important characteristics (disease resistance, maturity, uniformity, plant height, head type, color, and yield).			
1985-86	Commercial Elite -49, Increases		Al840169 F ₁₅
1986-87	Commercial Elite -16, Uniform Southern Nursery -37, Increases		F ₁₆
1987-88	Commercial Elite -10, Uniform Eastern Nursery -21, Increases		F ₁₇
1988-89	Commercial Elite -10, Increases		F ₁₈
1989-90	Commercial Elite -11, Increases		F ₁₉
1990-91	Transferred to Terral-Norris		Terral X1011
1992-93	Variety Addendum		

ANALYSIS OF VARIANCE TABLE

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-value	Prob
YEAR	3	660.53	220.177	36.65	0.0001
VARIETY	3	161.48	54.160	9.02	0.0060
Error	8	40.06	6.007		
Total	14	871.07			

Grand Mean= 113.694 Grand Sum= 1819.111 Total Count= 16

Coefficient of Variation= 2.16%

Means for variable 5 (HEADING DATE)
for each level of variable 1 (YEAR).

Var 1 Value	Var 5 Mean
1	104.028 1990
2	116.750 1989
3	112.500 1988
4	121.500 1992

Means for variable 5 (HEADING DATE)
for each level of variable 2 (VARIETY):

Var 2 Value	Var 5 Mean
1	115.500 TN 1011
2	109.000 Delhi 2308
3	117.500 Coker 9877
4	112.778 Savannah

led at 0.05 alpha level = 3.996

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For var 1 = 1 and var 2 = 4, Estimated value= 36.333

Variable 6: HEIGHT

ANALYSIS OF VARIANCE TABLE

Source	Degrees of Freedom	Sum of Squares	Mean Square	F-value	Prob
YEAR	3	15.67	5.222	3.98	0.0525
VARIETY	3	84.83	28.276	21.54	0.0003
Error	8	10.50	1.313		
Total	14	111.00			

Grand Mean= 37.583 Grand Sum= 601.333 Total Count= 16

Coefficient of Variation= 3.05%

Means for variable 6 (HEIGHT)
for each level of variable 1 (YEAR):

Var 1 Value	Var 6 Mean
1	36.333 1990
2	36.000 1989
3	38.500 1988
4	37.500 1992

Means for variable 6 (HEIGHT)
for each level of variable 2 (VARIETY):

Var 2 Value	Var 6 Mean
1	39.750 Tuloll
2	35.000 Delhi 2308
3	40.000 Gkn 4877
4	35.583 Savannah

1sd at 0.05 alpha level = 1.868

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EXHIBIT B

NOVELTY STATEMENT

To our knowledge, Terral 1011 most resembles Coker 9877 and Delhi 2368.

Differences include, but are not necessarily restricted to the following:

1. Terral 1011 heads at maturity are bronze colored (Munsell Color Chart 5 YR(4/6 to 5/6), where as Coker 9877 heads are tan (Munsell Color Chart 2.5Y/(8/4 to 8/6).
2. As determined by the Plant Disease Clinic, University of Minnesota, Delhi 2368 carries the leaf rust genes 2a, 10, 18 for resistance and Terral 1011 carries only 9, 11 genes for resistance to leaf rust. Coker 9877 carries Lr genes 9, 24 for resistance.
3. Terral 1011 is significantly later in heading date ($P=0.006$) and taller in plant height ($P=0.0003$) than Delhi 2368 when analyzed using an Anova.

	<u>Heading Date *</u> (Julian)	<u>Plant Height *</u> (Inches)
Terral 1011	115	39.8
Delhi 2368	109	35.0
C.V. (%)	2.16	3.05
L.S.D. (0.05)	4.0	1.85
F Value	9.02	21.54

* Data is from one location over four years.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
COMMODITIES SCIENTIFIC SUPPORT DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Terral-Norris Seed Co., Inc.

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

P. O. Box 826

604 Blount Street

Lake Providence, LA 71254

FOR OFFICIAL USE ONLY

PVPO NUMBER

9400041

VARIETY NAME OR TEMPORARY DESIGNATION

Terral 1011

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g., 0 8 9 or 0 9) when number is either 99 or less or 9 or less.

1. KIND:

1 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

2 1 = SPRING 2 = WINTER 3 = OTHER (Specify) 1 1 = SOFT 3 = OTHER (Specify)
2 = HARD

2 1 = WHITE 2 = RED 3 = OTHER (Specify)

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

1 1 8 FIRST FLOWERING 1 2 3 LAST FLOWERING

4. MATURITY (50% Flowering):

0 2 NO. OF DAYS EARLIER THAN 7 1 = ARTHUR 2 = SCOUT 3 = CHRIS 7 = Coker 9877
0 7 NO. OF DAYS LATER THAN 8 4 = LEMHI 5 = NUGAINES 6 = LEEDS 8 = Delhi 2368

5. PLANT HEIGHT (From soil level to top of head):

0 9 9 CM. HIGH

1 2 CM. TALLER THAN 7

0 1 CM. SHORTER THAN 8 1 = ARTHUR 2 = SCOUT 3 = CHRIS 7 = Delhi 2368
4 = LEMHI 5 = NUGAINES 6 = LEEDS 8 = Coker 9877

6. PLANT COLOR AT BOOTING (See reverse):

2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHUR COLOR:

1 1 = YELLOW 2 = PURPLE

8. STEM:

2 Anthocyanin: 1 = ABSENT 2 = PRESENT

2 Waxy bloom: 1 = ABSENT 2 = PRESENT

2 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT

1 Internodes: 1 = HOLLOW 2 = SOLID

0 4 NO. OF NODES (Originating from node above ground)

2 1 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

2 Anthocyanin: 1 = ABSENT 2 = PRESENT Under stress 2 Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

2 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED
3 = OTHER (Specify):

1 Flag leaf: 1 = NOT TWISTED 2 = TWISTED

1 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT

1 Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT

1 3 MM. LEAF WIDTH (First leaf below flag leaf)

2 3 CM. LEAF LENGTH (First leaf below flag leaf):

11. HEAD:

☐ 3 Density: 1 = LAX 2 = DENSE ☐ 2 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
4 = OTHER (Specify) _____

☐ 2 Awedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

☐ 7 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
5 = BROWN 6 = BLACK 7 = OTHER (Specify): Bronze

☐ 0 ☐ 7 CM. LENGTH. ☐ 1 ☐ 1 MM. WIDTH

12. GLUMES AT MATURITY:

☐ 2 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)
3 = LONG (CA. 9 mm.) ☐ 3 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
3 = WIDE (CA. 4 mm.)

☐ 2 Shoulder 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
shape: 4 = SQUARE 5 = ELEVATED 6 = APICULATE ☐ 1 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

☐ 2 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

☐ 2 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

☐ 2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

☐ 1 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL ☐ 1 Check: 1 = ROUNDED 2 = ANGULAR

☐ 2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG ☐ Brush: 1 = NOT COLLARED 2 = COLLARED

☐ 2 Phenol reaction 1 = IVORY 2 = FAWN 3 = LT. BROWN
(See Instructions): 4 = BROWN 5 = BLACK

☐ 5 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) Lt. Brown

☐ 0 ☐ 6 MM. LENGTH ☐ 0 ☐ 3 MM. WIDTH ☐ 2 ☐ 60 GM. PER 1000 SEEDS

17. SEED CREASE:

☐ 2 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'
2 = 80% OR LESS OF KERNEL 'CHRIS'
3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

☐ 1 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
2 = 33% OR LESS OF KERNEL 'CHRIS'
3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 2 STEM RUST MidSouth ☐ 2 LEAF RUST MidSouth
(Races) Field Race (Races) Field Races ☐ 2 STRIPE RUST MidSouth ☐ 0 LOOSE SMUT
(Races) Field Races

☐ 2 POWDERY MILDEW ☐ 0 BUNT ☐ OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 1 SAWFLY ☐ 0 APHID (Bydv.) ☐ 0 GREEN BUG ☐ 0 CEREAL LEAF BEETLE

☐ 0 OTHER (Specify) _____ HESSIAN FLY
RACES: ☐ GP ☐ A ☐ B ☐ C
☐ D ☐ E ☐ F ☐ G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Coker 9877	Seed size	Coker 9877
Leaf size	Coker 9877	Seed shape	Coker 9877
Leaf color	Coker 983	Coleoptile elongation	Coker 9877
Leaf carriage	Coker 9877	Seedling pigmentation	

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

EXHIBIT D**ADDITIONAL DESCRIPTION OF TERRAL 1011**

Terral 1011 is a common soft red winter wheat, *Triticum aestivum* L.

Terral 1011 is medium full in maturity, plant height relatively tall, medium test weight with bronze heads at maturity. Its coleoptile color is predominantly red (99.25% red, 0.75% green) and its phenol reaction fawn (99% fawn, 1% dark). It is tolerant to the herbicide Sencor at the 1/2 pint rate but can be killed at the 1 pint rate as evidenced by the enclosed photograph.

Terral 1011 is similar in appearance at maturity to Delhi 2368 but consistently later in maturity and taller in plant height. It looks most like Coker 9877 during the growing season but differs greatly as the cultivars began dry down at maturity, as Terral 1011's bronze head color becomes evident. Terral 1011 is resistant to races of leaf rust, stem rust and stripe rust present in the Mid South in 1991. It is resistant to the soilborne virus complex found in the Mid South.

EXHIBIT E**STATEMENT OF APPLICANTS OWNERSHIP**

Terral-Norris Seed Co., Inc. is the owner of Terral 1011 through purchase of the variety.

Milling and Baking Quality
TN1011

<u>Quality Parameter</u>	<u>--- 1989-90 ---</u>		<u>--- 1988-89 ---</u>		<u>----- 1987-88 -----</u>	
	<u>TN1011</u>	<u>FL302</u>	<u>TN1011</u>	<u>FL302</u>	<u>TN1011</u>	<u>McNair 1003</u>
Milling						
Score	98.0	100.0	89.7	100.0	102.1	100.0
Test Wt lb/bu	58.9	59.8	55.5	58.4	61.5	61.5
Softness Equivalent	57.6	58.9	58.3	56.7	55.6	59.3
Flour Yield %	74.9	74.9	69.2	71.7	72.5	70.1
Ash %			0.36	0.36	0.29	0.28
Baking						
Score	77.0	100.0	82.6	100.0	94.1	100.0
Flour Protein %	10.9	9.2	8.9	8.1	11.8	10.3
AWRC	54.7	51.6	55.9	53.5	53.3	54.9
Cookie Diameter	17.7	17.9	17.3	17.7	16.9	17.0
Top Grain	1.0	3.0	1.0	3.0	2.0	1.0

All evaluations conducted by USDA Soft Wheat Quality Lab; Wooster, Ohio.